B R E V I O R A

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A NEW SPECIES OF FRESHWATER GASTROPOD MOLLUSC OF THE GENUS *SAULEA* FROM THE MIOCENE OF KENYA

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The genus *Saulea* Gray 1867 (family Ampullariidae) has a thin, wholly corneous operculum, as found in the American genus *Pomacea*, and in this respect differs widely from the other African Ampullariidae, all of which have a calcareous operculum. The corneous opercula are unfortunately not known in a fossil state.

The only recent species of the genus *Saulea* is *S. vitrea* (Born)=*Helix vitrea* Born (1780, p. 383, pl. 15, figs. 15-16), originally described from an unknown locality, but now known to occur in the West African coastal regions of Liberia and Sierra Leone. The anatomy is at present unknown.

The possibility of the occurrence of *Saulea* in East Africa was first suggested by V. E. Fuchs (1936, p. 100) who considered a poorly preserved fossil from the Kaiso (Pleistocene) beds of Lake Albert as possibly referable to this genus. Adam (1957, p. 48), however, pointed out that this strongly carinated shell was more probably a *Viviparus*, perhaps a form of his own species *V. coxi* from the same deposit, and he later (1959, p. 15), correctly in our opinion, listed it in the synonymy of that species.

In 1962, Dr. B. Verdcourt very kindly sent to the senior author for examination a fossil shell, in the form of an internal cast in limestone, from Miocene deposits at Kirimon, east of Lake Baringo, Kenya, which, in spite of its poor state of preservation, he had no hesitation in referring to the family Ampullariidae (Pain, *in* Verdcourt, 1963, p. 7, fig. 10). This species is dextral in form, with a short, conical spire and somewhat barrel-shaped body whorl, features typical of the genus *Saulea*.

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It was not, however, sufficiently well preserved to make a description of it possible.

Recently we have, through the kindness of Prof. Bryan Patterson of the Museum of Comparative Zoology, Harvard University, received for study two further examples of this fossil collected at Kirimon by the Harvard University 1963 Kenya Expedition. These are both in a far better state of preservation than the original specimen, and have convinced us that all represent a so far unknown fossil species of *Saulea*, which is described and figured herein. It is to be hoped that future collecting at Kirimon will produce further and perhaps even better preserved specimens of this unique fossil, which has established beyond reasonable doubt the existence of this genus in East Africa in Miocene times, and its probably far wider distribution during the Tertiary period.

Saulea Gray

Saulea Gray, 1867, p. 1000. Type species by monotypy: *Helix vitrea* Born.

Saulea lithoides n. sp.

Holotype. MCZ 28018, internal cast.

Paratype. MCZ 28017, internal cast.

Horizon and locality. Late(?) Miocene, at Kirimon, approximately 42 miles east of Lake Baringo and 38 miles SSE of Maralal, Kenya, East Africa.

Diagnosis and description. An internal cast in limestone; 5½ whorls are preserved, the apex being decollate; the spire short, somewhat convex, the body-whorl oval or barrel-shaped in outline and a little inflated at the periphery, ¾ the total length; umbilicus very narrow, columella erect, curving slightly toward the base. Aperture of moderate width, vertical, oblong. The outer lip and base of the columella are missing in all the material examined.

Measurements (in millimetres; approx. only)

Length	Greatest width		
44	32	MCZ 28017	Paratype
39	27	MCZ 28018	Holotype
34	30	Coryndon Museum	Topotype

The authors' thanks are due to Prof. Bryan Patterson for the loan of material for study, to Mr. T. E. Crowley for much helpful advice and to Mr. R. F. Cumberland for photographing specimens for reproduction herein. The collection of the specimens was made possible under National Science Foundation Grant GP-1188.

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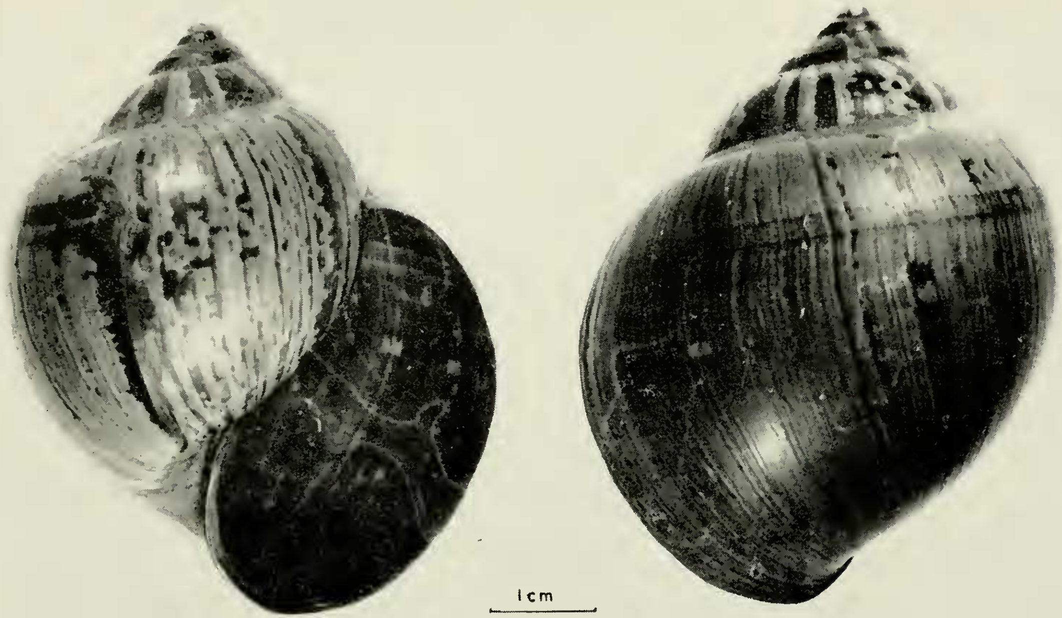

Plate 1. *Saulea vitrea* (Born) Liberia (Pain Coll.).

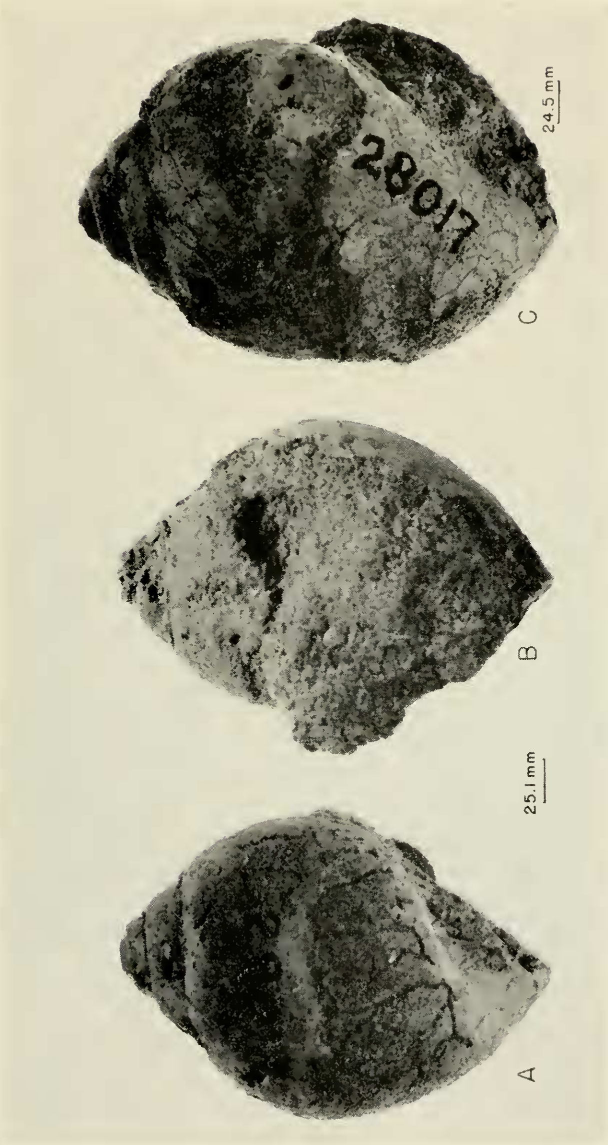

Plate 2. A, B, *Saulea lithoides* sp. nov. Kenya, Holotype (MCZ No. 28018). C, *Saulea lithoides* sp. nov. Paratype (MCZ No. 28017).